

Research in this area has advanced quickly at a time when, according to many measures, the numbers of secure jobs in the economies of industrialised nations are falling, to be replaced by a variety of more "flexible" types of employment contract.¹⁰ Perhaps public health advocates are at least as much influenced by the feeling that working conditions are regarded as something that can easily be sacrificed to the gods of economic productivity.¹¹

The paper by Artazcoz *et al* adds to this growing literature in important ways. The authors are well aware of the dangers that people with a tendency towards depression or anxiety may perceive their jobs as less secure.¹² They are able to show that the relation of less secure employment conditions to health depends on several other factors. One of these is sex. The other is social class (manual or non-manual). Not every kind of insecurity is associated with poorer psychosocial health. The highest excess risk is experienced by those whose contracts have no fixed term, or who have no formal employment contract at all: more or less a "dose-response relation".

Several recent meta-analyses¹³⁻¹⁴ have confirmed the effect of work insecurity on health. Whereas continued insecurity has been found to be a health risk, secure re-employment outside of a declining heavy industrial environment

has been found actually to improve health.¹⁵ Several papers have now concluded from their findings that reductions in job insecurity should be a point of intervention for government policies aimed at improving population health and reducing health inequalities.¹¹⁻¹⁶⁻¹⁷

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Occupational health

Flexible employment and health inequalities

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A flexible labour market could contribute to increasing health inequalities and should be a priority on the public health policy agenda.

The relation between flexible employment and health is a recent public health research question.¹ After a long period of progressive labour market regulatory policymaking, particularly in European Union countries, where the influence of trade unions is strong, employers now argue for a supply of a full time workforce that will allow them to compete in a global market characterised by continuous technical and organisational change. In

this global environment, and from a purely economic perspective, flexible employment has become considered as a necessary condition to increase productivity, and is a characteristic common to both developed and developing countries.

Recent research, however, has begun to suggest that flexible employment may have adverse effects on the health of workers. For instance, mortality is significantly higher among temporary

workers in comparison with permanent workers.² Persons who experience frequent job changes are more likely to smoke, consume more alcohol, and exercise less³; and workers who perceive job insecurity experience significant adverse effects on their physical and mental health.⁴ Despite some of the limitations of these kinds of studies, primarily in the various definitions of flexible employment (which can be variably defined as job insecurity, frequent job change, or type of contract), the picture regarding this important question is becoming clearer.

In this issue, Artazcoz *et al* add another piece to this complex puzzle.⁵ The authors examine the possible impact of flexible employment on health inequalities, and show an association between poor mental health outcomes and two forms of flexible employment (non-fixed term temporary contracts and being employed with no contract) that differentially affects less privileged workers: women and male manual workers.

A further unique contribution of this study is the analysis of the impact of flexible employment on marital and parental status. Workers, especially men, with temporary or no contracts seemed more likely to remain single and not have children. And although few associations were statistically significant, they do open research to study the possible role of flexible labour markets on low birth rates, a common problem of developed countries. In this regard, it will be interesting to consider the effect of flexible employment on single parents, especially women, as the analysis of children living at home was restricted to persons in the survey who were married or cohabiting. Given the increasing frequency of single parenthood in developed countries, and the possibility that an association between being a single parent and being engaged in precarious employment could conceivably go in either a positive or inverse direction (in fact, constituting an example of "reverse causation"), this issue should be examined more closely in future studies.

The next research question is to explore the mechanisms that could underlie the associations identified by this study. Why are some forms of temporary contracts associated with poor mental health? Are they attributable to more hazardous working conditions, to a lack of job experience or to both? Are temporary workers, with their

resulting greater job vulnerability, exposed to more stressful circumstances than permanent workers? In addition, other mechanisms related to precarious employment such as the organisational characteristics of the workplace (lack of unionisation or social benefits), or discrimination by both supervisors and permanent workers, should also be examined in future analyses.

It is true that not all flexible employment will have a negative effect on health. Among highly educated workers, such as managers and professionals, a flexible labour situation could be beneficial because job changes may be voluntary or reflect the initial stages of a professional career, or both. This is, in fact, suggested in the study, which found that the association between flexible employment and mental health status varied as a function of social class, mostly affecting less privileged workers. However, if this were true, then an added undesired effect of the flexible labour market could be that it contributes to increasing health inequalities among social classes. It has been previously established that the workplace is one origin of health inequalities⁶; this finding would add the labour market as another predictor of health inequalities, a clear priority on the public health policy agenda.

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THE JECH GALLERY

Trojan mice in global health issues

Freyer (<http://www.mice.com>) uses the imagery of Trojan mice, (small, well focused, and easily manoeuvrable initiatives focused on building creative relationships between existing systems and components) to reflect the complex adaptive systems theory principle that change is not incremental and small inputs can have unexpectedly large return. I use this "Trojan mouse" (gift with a hamburger meal) for engaging students in discussions about the imbedded health related issues of marketing to children, fast food consumption, and the effects on workers' health in outsourcing manufacturing to countries reliant on child and prison labourers.

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